

REMARKS

I. Introduction

In response to the pending final Office Action, Applicants have amended claim 1 to clarify the subject matter of the present disclosure. Support for the amendment to claim 1 may be found, for example, in paragraph [0026] and [0027] of the specification. No new matter has been added.

A Request for Continued Examination (RCE) is being filed concurrently with this amendment.

For the reasons set forth below, Applicants respectfully submit that all pending claims as currently amended are patentable over the cited prior art.

II. The Rejection Of Claims 1, 4 And 5 Under 35 U.S.C. § 103

Claims 1, 4 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Eylem et al. (USP No. 7,049,030) in view of Noriyuki et al. (JP 2000-082503). Applicants respectfully traverse this rejection for at least the following reasons.

Amended independent claim 1 recites an alkaline battery comprising: a negative electrode including a negative electrode mixture that contains a zinc alloy as an active material, the zinc alloy containing at least aluminum, an alkaline electrolyte, and a positive electrode, wherein the alkaline electrolyte comprises an aqueous KOH solution and LiOH and aluminum hydroxide that are dissolved in the aqueous KOH solution, wherein a portion of the alkaline electrolyte is contained in the negative electrode mixture, and wherein the amounts of the LiOH and the aluminum compound contained in the portion of the alkaline electrolyte in the negative

electrode mixture are 0.1 to 2 wt % and 0.001 to 0.2 wt % of the negative electrode mixture, respectively.

One feature of amended independent claim 1 is that the negative electrode contains an alkaline electrolyte having LiOH and aluminum hydroxide contained in the portion of the alkaline electrolyte in the negative electrode mixture in an amount of 0.1 to 2 wt % and 0.001 to 0.2 wt % of the negative electrode mixture, respectively. As a result of this feature, an alkaline battery having excellent discharge capacity may be obtained.

It was argued in the previous response that col. 4, lines 12-14 of Eylem state that the amount of aluminum is from 1 to 8 wt%. While lines 19-20 of col. 3 states that “less aluminum can be used”, it still does not disclose the precise range of 0.001 to 0.2% as recited in amended independent claim 1 of the present disclosure. Furthermore, Noriyuki fails to remedy this deficiency. For this reason alone, Applicants submit that the combination of Eylem and Noriyuki fail to render the present claims obvious.

Moreover, it was also argued in the previous Response that even if Eylem did encompass the claimed range of 0.001 to 0.2%, Eylem would still not render claim 1 obvious, because the claimed ranges show unexpected and superior results compared to the ranges outside the claimed range of LiOH and the aluminum compound, as shown in Tables 2 and 3. In response to the argument that the present specification shows unexpected and superior results, the Office Action states that without a showing of criticality for the claimed range over the prior art, the limitation is considered obvious in view of the teachings of Eylem.

Applicants would point out that Table 2 on page 15 shows how materials A5-A12, B5-B12, and C5-C12, which have aluminum hydroxide concentrations within the claimed range of

0.001 to 0.2%, exhibit far superior P% and discharge capacity over those outside the claimed ranges in amended independent claim 1. As such, the criticality of the claimed range has been demonstrated in the specification.

The Office Action further argues that Tables 2 and 3 of the specification are not commensurate in scope with the claimed invention because Tables 2 and 3 require that the aluminum compound be $\text{Al}(\text{OH})_3$, or aluminum hydroxide. In response, Applicants have amended claim 1 to cancel “aluminum compound” and to add “aluminum hydroxide” as a component of the electrolyte. Accordingly, Tables 2 and 3 do exhibit data commensurate in scope with claim 1 and the Tables 2 and 3 demonstrate the criticality of the claimed ranges. As such, Applicants submit that Eylem and Noriyuki, alone or in combination, do not render amended independent claim 1 obvious.

In order to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. As Eylem and Noriyuki fail to teach or suggest a negative electrode including a negative electrode mixture that contains an alkaline electrolyte, wherein said alkaline electrolyte comprises an aqueous KOH solution and LiOH and aluminum hydroxide that are dissolved in said aqueous KOH solution, wherein a portion of the alkaline electrolyte is contained in the negative electrode mixture, and wherein the amounts of the LiOH and the aluminum hydroxide contained in the portion of the alkaline electrolyte in said negative electrode mixture are 0.1 to 2 wt % and 0.001 to 0.2 wt % of the negative electrode mixture, respectively, it is submitted that Eylem and Noriyuki do not render amended independent claim 1 obvious. Accordingly, Applicants submit that claim 1 is allowable and patentable over the cited prior art. Accordingly, Applicants submit that claim 1 is allowable and patentable over the cited prior art.

III. All Dependent Claims Are Allowable Because The Independent Claim From Which They Depend Is Allowable

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as amended claim 1 is patentable for the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

IV. Conclusion

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication of which is respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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